



NEXT MEETING - Moonbounce

At 7.30pm on Tuesday 1st September we welcome the return of Pat Gowen, G3IOR to continue his description of extraordinary methods in amateur communication.

On his last visit Pat summarised the evolution of man-made Orbiting Satellites Carrying Amateur Radio (OSCAR) which by successive launches have given us a range of recognisable satellite numbers to associate with HF and VHF transponders which provide reliable radio relay.

This time Pat will talk about the oldest of them all, affectionately known as "Oscar Zero", in other words the Moon. This satellite provides a daunting specification to prospective users, being on average at the distance of 237,000 miles (381,000km) from Earth together with a surface reflection factor of only 6% yields a path loss of 251.5dB at 144MHz!

In spite of the odds against receiving a reflected signal back from the Moon, many more stations are now succeeding, with the aid of high gain aerials to transmit and low noise preamplifiers to receive.

Details of Earth Moon Earth (EME) techniques and an update on the satellite scene in general will provide a most interesting evening at the Marconi College, Arbour Lane Chelmsford.

DATES FOR YOUR DIARY

- 1 Sept. CLUB MEETING - Moonbounce - Pat, G3IOR.
- 6 Sept. VANGE A.R.S. RALLY - Laindon, Basildon.
- 6 Sept. DF EVENT - RSGB, Mid-Thames.
- 11 Sept. DF EVENT - Colchester.
- 18 Sept. DF EVENT - Chelmsford.
- 27 Sept. HARLOW AR RALLY - Harlow Sports Centre.
- 6 Oct. C.A.R.S. ANNUAL GENERAL MEETING.
- 23/24 Oct. LEICESTER A.R.S. SHOW - Granby Halls.

COMMITTEE MEETING

The September Committee meeting will be held in the Telford Lodge at 7.30pm on Wednesday 9th September, you are most welcome to join us.

CHARGING NI-CAD BATTERIES - Roy, G3PMX

The Nickel Cadmium Cell continues to be the most popular unit for storing electrical energy mainly because of its comparatively low cost and freedom from contamination damage when incorporated in electronic equipment.

Of late more second hand Ni-Cad's have appeared on the surplus market, mainly because large commercial organisations will not risk using them beyond their shelf date. Some of these in 12 volt packs have recently appeared for auction at club meetings and with this in mind I have prepared a data sheet on "Charging Ni-Cad Batteries" for the interest and guidance of CARS members.

Unlike other forms of storage batteries, Ni-Cad's should only be charged using a CONSTANT CURRENT SUPPLY; the data sheet provides details of a constant current circuit for use with the 1.2Ah (size R) cells but which can be adapted from its design current of 120mA to anything between 25mA and 4A.

The circuit utilises a high gain (darlington) NPN transistor type BDX67A, some of which the club has been able to obtain at 'surplus' price, which not only constitutes a bargain for members to purchase at 50p each but also will aid the equipment fund.

A specimen data sheet and transistor will be on display at the next meeting for those members, with the urge to construct, to place their orders.

RAT ISLAND DXPEDITION - Gwyn, G4FKH

An expedition to "Rat Island" took place on 25th July 1992, it was a joint venture between the Brightlingsea and Colchester Clubs. Rat Island is situated in the Colne Estuary east of Mersea Island. In order to gain access to the Island it was necessary to gain permission from the local County Authority, the Ministry of Defence and the National Trust. The Island is accessible only during periods of high tide. We set off from Brightlingsea at 7.00a.m. the journey to the Island took about 45 minutes, 3 boats took us (9 people).

George Cutting (G3GNQ) was invited as a "Guest Operator", as he didn't wish to go, he proposed that I took his place. I certainly had a wonderful day with some excellent operating.

The tents and aerials were up in good time (½ hour), however the VHF station was the first to have a QSO. The HF station was not very far behind. Rat Island is really a salt mud bank as it is flooded several times each year. This makes for an exceptional site for communications, the ground effect is spectacular. Even in the marginal HF conditions we were able to knock up at least 1 QSO per minute. We had one operator, two people preparing the QSL's and one person writing the QSL out as the QSO was complete. In all about 700 QSO's were made from the site, about 600 of those from the HF station. (There was a contest on VHF that somewhat spoilt their day). I, of course, operated on CW when it was my turn and had a ball. Charles, G0GJS, who was in Norfolk heard me but said the skip distance was wrong for him, I was working Germany at the time. However, lots of DX was forthcoming especially from the U.S.A. (We had an operator from New England, especially for the event.) Another good station was Reunion Island, I worked him on CW. Everyone was after the WAB and the Islands on the Air information which of course ensured our popularity.

In conclusion, it was a thoroughly enjoyable day with lots of smiling people at the end. What a site for N.F.D!

ANNUAL AWARD OF MERIT

Our Society Award of Merit will be presented at the October AGM to a member who has made a substantial achievement in the past year in the field of Amateur Radio. Nominations should be made in writing (not more than 100 words) and sent or given to a committee member by 1st September.

Voting will take place during the AGM.

LAST MONTHS MEETING - Charles, G0GJS THE 1992 ITU WORLD ADMINISTRATIVE RADIO CONFERENCE (WARC 92)

G3HTF, a friendly face, familiar to many members from his time with the Marconi Company, turned a "dry and dusty subject" into an intriguing evening, as he presented in expert fashion the complex organisation, detailed preparation and background to WARC 92 which was held in Madrid from 3rd Feb. to 3rd March this year. Les Barclay, Deputy Director of Branch R1 at the Radiocommunications Agency (RA), with particular responsibilities for Research and Forward Planning, explained that the prime purpose of the international gathering was centred around frequency allocation and planning. With Geostationary orbit satellites illuminating half the World's surface from 40,000km high, great pressure on HF bands, and countries in Europe wanting to move terrestrial broadcasting above 1GHz, there was an obvious need for concerted action and agreement by the representatives of the 132 countries who signed the ITU convention governing management of the spectrum.

The WARC 92 preparatory work by the many teams backing delegates to the conference involved close liaison with the ITU organisation whose headquarters are in Geneva. The ITU is a specialised agency of the United Nations and its conventions are founded upon International Law. Six languages underwrite its edicts - French, Russian, Chinese, Arabic, Spanish, English - and all were simultaneously translated during the main conferences in Madrid.

The agenda appeared from the ITU in June 1990 and up to the time of the conference considerable activity had occurred as the teams from the 132 nations sought to obtain prior agreement by consensus for their requirements. From the UK viewpoint the RA which has the mandate for representing the UK government on the international scene (also UK responsibility for licensing apparatus for civil use and the planning of the frequency spectrum) made many inputs into CEPT whose 32 member countries produced 14 communications proposals and sets of briefings on the European position.

Pre-conference work in the UK included liaising with the RSGB, the BBC World Service and a number of electronics companies. With more than 30 votes "powerful Europe" was obviously influential.

The major issues before the Conference included:-

- i) More spectrum for HF Broadcasting, impact on the 41m band.
- ii) More spectrum for Mobile Communications.
- iii) Allocations for low orbiting satellites (Motorola's Iridium system) and Geostationary platforms for voice quality hand held low data rate/low cost communication equipment.
- iv) High Definition Television (HDTV) direct to the home via satellite. World wide allocation not agreed - Region 2 (Americas) will use 17.3 to 17.8GHz and Regions 1 (Europe, Africa, USSR) and 3 (China, Pacific, Australia) 21.4 to 22GHz, w.e.f. 2003.
- v) Broadcast Satellite Service (Sound) which will provide "CD" quality broadcasting for home sound receivers including portable and mobile, utilises Digital Audio Broadcasting and is to be implemented with terrestrial broadcasting services to fill any gaps. Separate allocations were made, 1452 to 1492MHz for all ITU regions with the USA also using 2310 to 2360MHz which is within the worldwide amateur secondary band 2300 to 2450MHz.

STOP PRESS. Hughes Aircraft have just announced that with Digital(DEC) and the Network Computing Corporation that they are launching a Satellite TV project in the USA in 1994 which will reach 10 million homes by the end of the decade, providing 150 channels.

Thomson Consumer Electronics of France has an exclusive deal to supply the first million satellite receivers which will retail around

\$700 each. Not HDTV, but obviously a step on the way.... no doubt the "On-Off" switch will become a major technical feature!

From the Amateur viewpoint, our interests were well protected at WARC 92. Indeed a "thank you" from Mexico for the help provided by the Amateur Service after the 1985 earthquake was coupled with the observation concerning how fragile modern technology could be at times of natural disaster! Mexico also proposed the possibility of aligning the amateur frequencies around 7MHz and this could happen at a future WARC resulting in allocations to us of 6.9 to 7.1MHz. On the 'downside', Wind Profiler radars were coveting frequencies in the 50MHz and 1.3GHz bands and the amateur community needs to monitor this issue very carefully.

Secondary amateur allocations at 2.3GHz remain unchanged but there will be more services operating in the band - viz BSSS in the USA. Les Barclay urged us to maximise the usage of all bands allocated to amateurs and to lobby the appropriate organisations and departments to protect our interests at all times. The meeting concluded with the feeling, as expressed in the vote of thanks to Les, that the wellbeing of amateur radio was in safe hands thanks to the efforts and professionalism of the Radiocommunications Agency.

DF NEWS

There are no reports of DF events this month, However, we proudly report a success story concerning one of our members.

Andy Collett, G0JSU has featured in the lists of winners on a number of occasions this year in RSGB DF Contests and although the calendar is not yet complete, Andy has done a "Nigel Mansell" by achieving an unbeatable position for the 1992 Best Overall Performance Trophy . . . well done Andy.

RADIO GARDEN PARTY - Ela G6HKM

Listening to the weather forecast on the eve of this event, it was a bit of a cliff hanger to know if the Garden Party would go ahead, however luck was on our side. The morning of the 23rd was bright and sunny, by mid-day there was quite a lot of cloud but this was no deterrent and 15 guests attended the party which was a great success.

The Club FT747 was in use most of the time, in a shady corner well protected by trees in case of showers, at the other end of the garden was John's home brew 2M rig. On the lawn was (dare I mention) a CB rig and antenna at ground level.

Earlier in the day John G8DET had a few QSO's on 2M, one was with another John, G3VMJ who lives in Baddow, John (G8DET) issued an invitation and it was nice to meet the other John (G3VMJ) and his wife at the party, (gets a bit confusing with all these Johns').

The rain held off until late afternoon, all the equipment was gathered in good time, at John's elevated QTH on Danbury Hill you get early visibility of approaching rain showers.

There was a lovely spread of cakes, etc, Pauline kept the cups of tea flowing, three cheers for the dishwasher.

Thank you from all of us to John and Pauline for their hospitality.

73 from Roy & Ela Martyr, G3PMX & G6HKM

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FOR SALE

UNIDEN PRESIDENT HR-2510, 10 Metre Transceiver with digital frequency display, SSB/AM/CW/FM, 10/25W output, 12Vdc. £210 o.n.o.
H.F. ATU, 100W input power, co-ax to co-ax. £15
WELTZ SP-10-X, Power/SWR Meter, 1.8-1500MHz, 0-20W & 200W fsd. £25
Contact G4WXT, QTHR, Tel: (0376)326577.